

Testimony
on the
FY 2005 Budget Request for the Department of Education
by
Dr. Charles P. Casey
on behalf of
The American Chemical Society
before the
House Appropriations Committee
Subcommittee on Labor, HHS, Education and Related Agencies

March 23, 2004

Good Morning Chairman Regula, Ranking Member Obey, and members of the Committee. As President of the American Chemical Society, it is a pleasure to have the opportunity to present our views on appropriations for math and science education at the Department of Education. ACS is the world's largest scientific society. It represents more than 159,000 chemists and chemical engineers in industry, academia, and government. In addition to being President of ACS, I am also a professor of chemistry at the University of Wisconsin.

Let me start by thanking this committee for its continued support for investment in math and science education, specifically the Math and Science Partnership Program at the Department of Education. We understand the difficult choices that must be made in this time of worsening deficits, and we commend the committee for taking the long view and providing a notable increase for this vital program in FY 2004.

When we think of the huge national challenges that lie before us in areas like homeland security, climate change, job creation, energy independence, and curing disease—the Department of Education doesn't normally spring to mind. But it should, because progress in these areas will depend more than anything else on new technologies and on training the next generation of scientists and engineers. And the Department of Education plays a central role in educating this next generation of innovators.

As our economy depends increasingly on technology, we know that we will need more U.S. students in science and engineering. And to stay a technological step ahead in the global market, we know that they will have to be proficient. Unfortunately, today's middle and high school students on average lag well behind their European and Asian counterparts in science and math, and decreasing numbers of students are earning science and engineering degrees.

The Department of Education's Math and Science Partnership program aims at the root of this student quality and quantity problem by improving teacher quality and curricula in these subjects. This will not only improve student achievement, but attract more students from all backgrounds into scientific fields.

ACS urges this committee to work toward the \$450 million authorized for this program under the No Child Left Behind Act by providing the \$269 million requested by the President for FY 2005. Regarding the allocation of this funding, however, we do not support the administration's idea of using the entire \$120 million proposed increase for a new high school mathematics initiative. This proposal strays from the intent of the original law to address the equally critical needs in math *and* science. It would place new constraints on states seeking flexibility to address their K-12 math and science needs, and it could fracture the innovative partnerships being formed to address teacher quality and student achievement gaps in both subjects.

Mr. Chairman, the Math and Science Partnership program is the Department's sole source of dedicated funding for K-12 math and science education. It is fostering the advancement of merit-based partnerships between local school districts and university science and engineering departments across all states. Other key partners include industry, community organizations, science museums, and professional and educational organizations. The Partnership program supports activities such as sustained professional development; recruiting science and engineering majors to teaching; designing and implementing rigorous math and science curricula; and developing programs that bring more scientists in contact with K-12 teachers.

The most recent NAEP scores show that only 30% of 8th graders are proficient or advanced in science. Worse yet is that 41% don't demonstrate even basic knowledge in science. We must invest in improving teacher quality because research shows a strong correlation between well prepared teachers in the subject and higher student achievement. It is alarming that 42 percent of students taking physical science courses in the middle grades are taught by out-of-field teachers, who have neither a major in this field nor certification. This percentage is significantly higher than in other subjects. The Math and Science Partnership program tackles this problem head on through sustained professional development to improve teacher's subject matter competence—building on the requirements for highly qualified teachers in the No Child Left Behind Act.

Mr. Chairman, Congress has an important role to play in improving our nation's teacher quality and ensuring an adequate, skilled, and diverse workforce. In no areas are these needs greater today than in science and math. Just ask our industry leaders. Each year we hear increasing numbers of CEO's in the chemical, electronics, and other industries sounding the alarm and calling for major improvements in K-12 math and science education.

Let me close by saying that we need improved K-12 math and science education not just because of workforce demands, or even to create the revolutionary technologies of tomorrow, but because we believe *all* citizens must have a basic understanding of these subjects, and that current and future workers in *all* sectors should possess basic science and math skills.

Education is clearly vital to the success of the nation, and we believe K-12 math and science education has been on the back burner for far too long. Thank you again for the opportunity to be here today and for taking the views of the American Chemical Society into account. I look forward to answering any questions.